

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-008377**Date Inspected:** 09-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 715**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Wang Chuan Qing and Mr. Lu Yang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**Tower Bay 10**

This QA Inspector observed ZPMC welder Ms. Xu Kauzhen, stencil 051413 is using welding procedure specification WPS-B-T-3221-TC-U5-S-1 to make East Tower submerged arc groove weld EDI-A5001-30-1A. The QA Inspector observed ZPMC Quality Control Inspector Mr. Yu Zhi Lai visually inspecting the weld groove and base material temperature prior to commencement of the welding. QA Inspector measured a welding current of approximately 570 amps and 30.0 volts. The QA Inspector observed that prior to welding ZPMC had preheated the base material using electric heating elements and Ms. Xu Kauzhen is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hua Gui Mei, stencil 050295 is using welding procedure specification WPS-B-T-3221-TC-U5-S-1 to make East Tower submerged arc groove weld EDI-A5001-8-1A. The QA Inspector observed ZPMC Quality Control Inspector Mr. Yu Zhi Lai visually inspecting the weld groove and base material temperature prior to commencement of the welding. QA Inspector measured a welding current of

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approximately 560 amps and 28.5 volts. The QA Inspector observed that prior to welding ZPMC had preheated the base material using electric heating elements and Ms. Hua Gui Mei is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Feng Leilei, stencil 052889 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-54. This QA Inspector measured a welding current of approximately 170 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Feng Leilei is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Jianzhen, stencil 052892 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-52. This QA Inspector measured a welding current of approximately 150 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Liu Jianzhen is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Ge Guo Chang, stencil 053469 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-42. This QA Inspector measured a welding current of approximately 170 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Ge Guo Chang is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Han Bing Jun, stencil 040598 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-44. This QA Inspector measured a welding current of approximately 170 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Han Bing Jun is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Panpan, stencil 057239 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-14. This QA Inspector measured a welding current of approximately 160 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Li Panpan is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

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This QA Inspector observed ZPMC welder Mr. Fang Yung Jie, stencil 054547 is using shielded metal arc welding procedure WPS-B-F-4314-TC-P5 to make South Tower lift 4 fillet tack welds in the 4G (overhead) position on tower weld SSD1-FDSA4-1B/C-16. This QA Inspector measured a welding current of approximately 150 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao verified the base material was preheated to a minimum of 180°C prior to welding. This QA Inspector observed Mr. Fang Yung Jie is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Yunjing, stencil 040392 is using shielded metal arc welding procedure WPS-B-P-2211-B-U3b to make tack welds on North Tower weld NSD1-A802A/B-15A. This QA Inspector measured a welding current of approximately 165 amps and the welding electrodes are being stored in a heated portable electrode storage oven. This QA Inspector observed ZPMC QC Inspector Mr. Lu Wei Chao was monitoring this welding. This QA Inspector observed Mr. Li Yunjing is qualified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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